Case Study

Historic England

Client:

Historic England is the public body that helps people care for, enjoy and celebrate England's spectacular historic environment.

Industry:

Non-departmental public body

Product:

Aerial Photography

> *"High resolution aerial photographs supplied through the APGB agreement provide a valuable archaeological mapping resource, adding to a wealth of sources that help to create the Aerial Archaeology Mapping Explorer. The geographical accuracy of the data is also a main source of control for the rectification of historic photography and positioning of photogrammetric models."*
>
> Dave Knight FSA, Senior Aerial Survey Investigator (Research Collaboration), Archaeological Investigation

Summary:

Historic England's Aerial Survey team use airborne remote sensing data to identify, map and record archaeological features at a landscape scale. This information helps local authorities better manage archaeology and provides a valuable heritage resource to commercial companies and the general public.

Challenge:

Many archaeological features are only visible from the air under certain conditions. It is important to have access to a wide range of aerial photography spanning many years in order to maximise the chances of identifying sites. Up to date photography is also essential for recording the latest condition of archaeological monuments.

Historic England's Aerial Survey team uses large amounts of archive photography to create maps of multi-period archaeological landscapes. Accurate orthorectification of these images, some of which date back over 100 years, is essential to create a robust dataset that can be used to effectively manage the historic environment.

Solution:

APGB imagery offers a broad date-range of additional mapping sources that can be incorporated directly into a GIS. These can be used to map the archaeology that is visible on them without the need for additional rectification and also to assess the latest condition of monuments.

The georeferenced aerial photography is also used as control for rectifying historic aerial photographs and for creating photogrammetric models from aerial photographs taken by our aerial reconnaissance team. The APGB height data provides additional accuracy in this process, allowing distortions caused by topographic variation to be accurately removed.

Results:

The geographical accuracy and high resolution of Bluesky's imagery makes it a very valuable resource. It is used to map upstanding archaeological monuments and often captures marks in the crop which form over buried remains in dry conditions. Combined with historic aerial photography, lidar and reconnaissance photography from Historic England's own flying programme, the data allows them to build up a more complete record of the historic environment. Ultimately, the mapping derived from APGB data is made publicly available via Historic England's Aerial Archaeology Mapping Explorer and in Research Reports.

	Imagery Specification	
Resolution	**12.5cm**	**25cm**
Coverage	Great Britain	Great Britain
Accuracy XY	± 30cm rmse	± 60cm rmse
Formats	Include: JPG, TIFF, ECW	Include: JPG, TIFF, ECW
Standard Projection	British National Grid	British National Grid
Tile Size	1km x 1km (8,000 x 8,000 pixels)	1km x 1km (4,000 x 4,000 pixels)
Metadata	Gemini 2.3	Gemini 2.3

Get in touch today at **support@apgb.co.uk**